Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

HW#73H: Parallelograms

Honors Geometry

Due: Wednesday, March 25th, 2015

**Failure to show all work and write in complete sentences will result in LaSalle!**

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| 1) Find the value of each variable in the parallelogram. | 2) Find the value of each variable in the parallelogram. |
| 3) Find the value of each variable in the parallelogram. | 4) Find the value of each variable in the parallelogram. |
| 5) Use the diagram of parallelogram MNOP and parallelogram QRST. Points Q, R, S and T are midpoints of MX, NX, OX, and PX. Find the indicated measure.     1. *PN* 2. *MQ* 3. *XO* 4. *m*∠*NMQ* 5. *m*∠*NXO* 6. *m*∠*MNP* 7. *m*∠*NPO* 8. *m*∠*NOP* | 6) Find the area of the parallelogram. |
| 7) Find the area of the shaded polygon. |

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| 8) If the area of a square is 49 m. How long is the diagonal of the square? | 9) If the sides meet at right angles, find the perimeter of the figure.  2  14  10  13 |
| 10) For a given rectangle, the length is 6 units longer than the width. If the perimeter of the rectangle is 44 units. Find the area of the rectangle. | 11) The following baseball field is in desperate need of a new fence. If each straight side measures 300 ft. How many feet of new fencing should be purchased?  **Exact Answer: Approx. Answer:** |
| 12) The sides of a square are decreased by 3 cm, the area is decreased by 81 cm2. What were the dimensions of the original square? | 13) Computer monitors are measured by their diagonals. If a monitor is advertised to be 15 in, what is the actual viewing area, assuming the screen is square? Leave your answer as a simplified radical. |
| 14) Given: ABCD is a parallelogram.  Prove: The diagonals of ABCD are bisectors (in other words, prove that AE congruent to CE and DE congruent to BE) | |